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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/695,721      | 10/28/2003  | Jerrel C. Anderson   | AD7065 USNA         | 5537             |

23906 7590 07/19/2005

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LEGAL PATENT RECORDS CENTER  
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| EXAMINER |
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NAKARANI, DHIRAJLAL S

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| ART UNIT | PAPER NUMBER |
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1773

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/695,721

Applicant(s)

ANDERSON, JERREL C.

Examiner

D. S. Nakarani

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 5-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/19/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-4 are, drawn to an interlayer and a glass laminate, classified in class 428, subclass 441<sup>+</sup>.
  - II. Claims 5-7 are, drawn to a process, classified in class 156, subclass 99<sup>+</sup>.
2. The inventions are distinct, each from the other because:
3. Inventions I and II are independent and distinct from each other because the invention of Group I does not require primer layer formed using primer solution. The invention of Group II does not result in a multilayer interlayer of the invention I as claimed.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Mr. Kevin Dobson on June 21, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-4. Affirmation of this election must be made by applicant in replying to this Office action. Claims 5-7 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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6. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Frost et al (U.S. patent 5,932,329).

Frost et al disclose a support film (4) with infrared (IR) light reflecting coating (3) sandwiched between two thermoplastic adhesive layers (5, 6) to form an interlayer. The thermoplastic adhesive such as polyurethane is disclosed. The thermoplastic

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polyurethane does not contain plasticizer. The multilayer interlayer is used to make glass laminate (fig and col. 2 line 24 to col. 3, line 28).

10. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frost et al (U.S. Patent 5,932,329) in view of Bolton et al (U.S. Patent 4,906,703).

Frost et al, which has been discussed above in paragraph 9. Further, Frost et al also disclose a thermoplastic adhesive such as polyvinyl butyral. Frost et al also suggest any thermoplastic adhesive known for glass laminate can be considered for the adhesive layer (col. 3, lines 20-25). Frost et al's support film (4) can be a polyethylene terephthalate film, polycarbonate film, acrylate film etc (col. 2 lines 50-54). Frost et al fail to disclose claimed thermoplastic ethylene/unsaturated acid copolymer ionomer known in the glass laminate art.

Bolton et al disclose a glass laminate comprising glass/ionomer resin/plastic/ionomer resin/ glass structure. Bolton et al's plastic can be polycarbonate, polyester such as polyethylene terephthalate and acrylic (col. 6 lines 34-42 and col. 7, lines 49-54). Bolton et al. disclose that thermoplastic polyurethane is expensive (col. 1 lines 52-55) and plasticized polyvinyl butyral adhesive with polycarbonate develops stress cracks (col. 1 lines 35-42). Bolton et al's ethylene/acrylic acid copolymer ionomer solves those problems.

Therefore it would have been obvious to a person of ordinary skill in the art at the time of this invention made to utilize disclosure of Bolton et al in the invention of Frost et al to make multilayer interlayer and glass laminate using ionomer resin taught by Bolton et al to replace thermoplastic polyurethane and/or polyvinyl butyral adhesive.

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No claims are allowed.

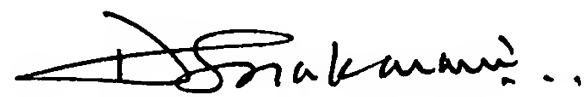
11. Receipt of Information Disclosure Statement filed April 19, 2004 is acknowledged and has been made of record.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. S. Nakarani whose telephone number is (571) 272-1512. The examiner can normally be reached on Tuesday-Friday from 7:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. S. Nakarani/af  
June 2005-06-24

  
**D. S. NAKARANI**  
**PRIMARY EXAMINER**